$$\int x \cdot \ln x \, dx =$$

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PER PARTI

$$= (\int x)\ln x - \int (\int x)(D \ln x)\, dx =$$

$$= \frac{1}{2}x^2 \ln x - \int \frac{1}{2}x^2 \frac{1}{x}\, dx =$$

$$= \frac{1}{2}x^2 \ln x - \frac{1}{2}\int x \, dx =$$

$$= \frac{1}{2}x^2 \ln x - \frac{1}{2}\cdot\frac{1}{2}x^2 + k =$$

$$= \boxed{\frac{1}{2}x^2 \ln x - \frac{1}{4}x^2 + k}$$
